

A SMALL REALM.

UNIQUE KINGDOM IN REMOTE CORNER OF ASIA.

Remarkable and Adventurous Career of Its Founder, Raja Brooke, Independent Ruler of Three Great Kingdoms, Sarawak, Brunei, and Borneo.

(Special Letter.)

There is a unique kingdom hidden away in a corner of Asia of which most people know nothing or at most the bare outline. It was founded by an Englishman, and is ruled by an English king as absolutely as all the Russian are ruled by the czar, and yet England has no right, even of supervision, in its internal government, and the warships of at least three great powers salute its flag when they anchor within its territorial waters.

Its ruler is Sarawak, and its present king is Sir Charles Johnson Brooke. He succeeded the first king, his uncle, Sir James Brooke, whose life story reads like a romance.

The son of a civil servant of the Honorable East India Company, James Brooke was born in India in 1828, and after attending the Norwich grammar school, received an English education in the British Native Infantry of the Bengal army, and joined his corps at the age of 18. He was seriously wounded in an engagement in the first Burmese war, in which he commanded a body of volunteer native cavalry, and on returning from England—whether he had been on furlough—entered shipwreck, and was thus delayed in rejoining his regiment, to which he had been recalled.

As it afterward proved, this was a lucky accident, for it ultimately led to his resigning his commission and severing his connection with the East India Company. In the voyage which he subsequently made to China he first saw the island of the Malay archipelago, and some inner voices then whispered that his destiny awaited him in those long-neglected corners of the East.

The possibilities of adventure and discovery which Borneo held were sufficient attraction for an adventurous man; but above and beyond this rose an ambition to extirpate piracy and slavery, to reform a distracted country by methods of his own, to stand as a shield between oppressor and oppressed, and it was an ambition to which he remained consistent to his last breath.

In the face of great difficulties a yacht was procured and manned, and in this Mr. Brooke set sail for Brunei in the year 1838. The sultan of Brunei was little better than an imbecile, and all state functions were practically in the hands of his uncle, Raja Muda Hassan, who gave Brooke a warm welcome, and at once enlisted his services for the suppression of the rebellion which had broken out in the state.

In gratitude for this assistance, and in order to retain the services of an ally whose value he was quick to recognize, Raja Hassan handed over to the small province—some 2,000 miles in extent—of Sarawak and its dependencies to Mr. Brooke, an urgent reason for this generosity being that he was unable to control it himself.

Of this territory Mr. Brooke was formally proclaimed rajah on Sept. 24, 1841; but in the preceding two years during which he had administered its affairs, he had completely won the hearts of all the better disposed natives. In spite of the fascinations a throne exercises over most imaginations, few kingdoms could have seemed less desirable than Raja Brooke's, for the condition of the country was anything but peaceful.

There was practically no exchequer and absolutely no revenue; his peaceful subjects were harassed to death, and he never knew how much he could depend on outside assistance to right them. Yet his influence was daily on the increase, for by a marvelous intuition he at once understood the character and the native point of view of the natives.

Brooke succeeded in enlisting the sympathies of the British naval authorities on the China station, and his great friend, Capt. Henry Keppel, who, with sword, pen and voice did more for Borneo than any other man, the Brooke excepted, was sent in command of the frigate *Albatross* to aid him in suppressing the pirates of the Sarawak and Borneo rivers, and more particularly the formidable bands who followed the flag of the terrible Raffles.

These pirates had never been conquered, and were regarded by Mr. Brooke's people as invincible. Yet when he told them he should go, but only on condition that they should accompany him or not, as they thought best, they merely replied: "What is the use of our remaining? If you die, we die; and if you live, we live. We will go with you!"

An expedition consisting of the Di-

vis boats manned by bluejackets, and native craft, conveying a larger force of Dyaks, under the command of Captain Keppel and Mr. Brooke, proceeded to or on miles up the great rivers and their tributaries, and attacked the strongholds of Sarawak and Borneo, so that the first time the experience these pirates were subjected to their own.

The fighting was of the most interesting description, and was attended by quite a respectable number of casualties on the winning side.

Brooke's last fighting man, Patrick All: Mr. Brooke, one of his white staff, Lieutenant Wade of the Dyaks, and many another brave Englishman and Dyak met their death in these battles, but in attaining their object the expeditions were entirely successful. The once dreaded chief, Raffles, was driven across the mountains single and unattended, beyond the reach of doing further harm.

His wife, Miss Jane Brooke, visited England and met with a most enthusiastic reception from those who could understand and appreciate his work. He was hidden to Windsor, where the queen not only made him a knight of the Bath, but conferred on him the appointments of governor of Labuan and consul general of Borneo. Two years later, in 1858, in July, 1858, the independence of Sarawak was recognized by America, Italy and England, and the great man died with the knowledge that it had entered on the path of prosperity, with increasing population, trade and revenue.

Mr. Charles Brooke, his successor, was born in 1859, and having spent 19 years in the royal navy, served as a lieutenant for 20 years in Sarawak. He married the Baroness, Margaret, only daughter of Mr. de Windt of Blenheim Palace, Wiltshire, England, in 1883, who is now queen of Sarawak.

By concessions and purchases of territory, including coal mines, harbors and extensive rivers away to the north—chiefly from the declining sultanates of Brunei, Sarawak has increased to 13 times its original area. It now comprises 50,000 miles—five times the size of Belgium—with 400 miles of coast line, and has a population of 200,000. Notwithstanding the cost of its efficient administration, it is less than that of any Asiatic country, presided over by Europeans. Its expenditure is about \$200,000 annually.

PSYCHE OF GREECE.

An Beautiful That Mortals Mistook Her For Venus.

Psyche is an exquisite creation of the later mythology of Greece. She was the youngest of the three daughters of a king, and so beautiful that mortals mistook her for Venus herself, and did not dare to love, but only to worship her. This excited the jealousy of the goddess, who sent Cupid to tempt Psyche with a passion for the most contemptible of all men. Cupid, however, was smitten with her charms, and carried her away to a beautiful palace, where he visited her every night, unseen and unknown. He bade her never let curiosity overcome her, and one night while he was asleep she took a lamp and went to look at him. She saw with rapture that he was the most handsome of the gods, but in her excitement she let a drop of hot oil fall on the sleeper's shoulder. This awoke Cupid, who upbraided her for her mistrust, and vanished. Psyche then set out to look for her lover, and coming to the palace of Venus she was seized by the goddess and kept as a slave. Cupid, however, reconciled her to his mother, and was united to her in immortal wedlock. In works of art Psyche is represented as a beautiful maiden with the wings of a butterfly. Her story has been considered as an allegory of the progress of the human soul through earthly passion and misfortune to pure celestial felicity, but it must not be forgotten that it is merely a version of one of the most widespread folk-tales in the world.

Keep the Hands Clean.

To keep the hands nice, cleanliness is the first essential, and, therefore, when rough work has to be done it is well, if possible, to put on gloves. Prevention is better than cure, and as nothing spoils the hands like getting them grimed it should be avoided as far as possible. When this occurs, however, don't go to work upon them with soap and a brush. Instead, take some vasoline or oil and rub it into the hands and then wash them thoroughly with a good toilet soap and a piece of flannel in warm water. The flannel will soon clean them and without injuring the skin in any way. It is far better than a nail brush for ordinary use and if used regularly a nail brush will be found almost, if not entirely, superfluous.

Dealing Young Filipinos.

In the maps of Europe which were used in the Philippine schools under the Spanish regime a large place in the center of the continent, usually comprising more than one-half the page, was marked Spain; all the rest of the countries were scattered about the edges. Thus the young Filipinos came to have a very distorted idea of the magnitude of the country of his oppressors. Even Aguinaldo was surprised to learn that America covers a greater area than Spain.

Millionaire Knows How to Live.

James Gordon Bennett, who recently paid one of his semi-occasional visits to New York, is somewhere in the 60's, but really looks ten years younger. One of his friends is quoted as saying that "Jim seems to have learned the secret of how to live on a million a year. Nine out of ten men with his income would have been dead long ago, and Jim hasn't traveled much faster than that."

An Old Moonshiner

OLD BILL PRITTS RAN A SMALL DISTILLERY.

One of the most remarkable characters of the mountain regions of Western Pennsylvania is Bill Pritts, who was convicted of moonshining in the United States district court at Pittsburgh last week. He has long been a resident of Fayette county and was notorious far and wide as one of the most daring men in his line of business.

His two sons, John S. and Henry Pritts, were also included in the information, but they did not appear. The case excited great attention on account of the numerous efforts to capture Pritts in his mountain home and his numerous successful escapes from the revenue officers. He was finally captured at his home last May. Against the Pritts family the following charges are made, on all of which the United States grand jury found true bills.

William Pritts, John S. Pritts and Henry Pritts, as distillers who failed to give bond and as distillers carrying on business with intent to defraud the United States, William Pritts, retail liquor dealer, failing to pay special tax.

Ignored bills—John S. Pritts and Henry Pritts, retail liquor dealers, failing to pay special tax.

John and Henry Pritts were arrested in October, 1899, but the old man made his escape, being wounded

while he placed famous old "Bill" on the top of the list of the queer characters developed in the mountains of Western Pennsylvania. Like all men of his class, Pritts had many close friends among his neighbors, and these assisted him frequently in evading the officers of the government. Among the people of the mountain region it is not regarded as a crime to deal in the sale out of the tax on whisky. Men otherwise honest would scruple to traffic in whisky that had not been tribute to the government, and those who endeavor to collect it have a rocky time of it. The moonshiner is seldom without notice of the presence of revenue officers in the vicinity of his still, and he has ample time to conceal all evidences of his illicit occupation. His patrons can never be induced to testify against him and the officers, even though they may be nearly certain of the guilt of a suspect, have a hard task to procure the evidence necessary to convict. Bill Pritts was fortunate in having the good will of his neighbors, and as that account he long enjoyed immunity from arrest. The officers now claim to have proofs of his guilt and the confidence of being able to give him a long term in the penitentiary. During his trial Pritts manifested the greatest animosity. He admitted that he drank all the whisky he could get



BILL PRITTS.

in the best during his flight by a bullet from the revolver of United States Deputy Marshal Frank Campbell. The two boys stood trial at the May term of court and the jury disagreed. Their bail was not renewed, but a stay was granted until this term of court, when they were told to be present. When called yesterday afternoon neither of them was present and the father was the only one who responded. Attorney R. B. Kennedy of Uniontown, their attorney, was unable to explain their absence. The court advised Mr. Kennedy to have his clients appear.

The case against Pritts was opened by Assistant United States District Attorney J. N. Langham. Deputy Collector of United States Internal Revenue W. J. Dickson was the first witness called. He described how, while he and two others were engaged in demolishing a still on Pritts' farm in October, 1899, father and sons were seen approaching along a path. They stopped their work on the still and waited their arrival, when the three leaped out at the men and covered them with their revolvers. "Bill" Pritts escaped. Deputy Collector Dickson said that the still was then in operation. Hot coals were lying beneath the still and a mass of something was in the still. His barrels of mash, he said, were in the stillhouse.

"Bill" Pritts, he said, was captured the following May by himself and Deputy Marshal A. McBeth. He was found near a house of one of his neighbors. The officer said that when he caught the defendant the latter denied being "Bill" Pritts and said that at any rate he had done nothing wrong. Frank Campbell, ex-United States deputy marshal, and Emanuel Conner, who followed Dickson as the witness stand, corroborated Dickson's testimony.

A task of the farm of "Bill" Pritts, with the location of the house and the still, was submitted in evidence when W. R. Horton, a surveyor, was called. "Bill" Pritts said came into prominence with the killing of Tony Hochmeister several years ago. Robert Miller, one of the party implicated, saw himself and served four years in the penitentiary. The others were never apprehended. The history of his numerous encounters and escapes has several times been printed, and

made the admission as though it were a good joke and it tickled him. He admitted, however, that he had done so twenty years ago. He was as delighted as a youngster when United States marshals told of trouble they had experienced in capturing him. Like many another man, Bill Pritts is a mixture of simplicity and craft, but the proportions are hard to determine.

COAL CONSUMPTION.

Per Capita Income Fifty Per Cent in Ten Years.

In spite of continued effort to increase the efficiency of engines and boilers the progress of invention is such that coal is becoming each year a more and more important article of commerce. So short a time ago, viewing the history of the world, as 1831 Great Britain was 24,000,000 tons; for the year 1901 the coal production will probably be 240,000,000 tons, an increase of 1,000 per cent. In 1831 the population of Great Britain was 24,000,000 and the next census, 1901, will probably show about 40,000,000 in that country, an increase of 66.6 per cent in seventy years. Therefore the per capita consumption of coal has increased from one ton per capita to six tons, and the rate of increase has been fifteen times as great as the rate of increase in population. In 1840 the production of bituminous coal in the United States was between 1,000,000 and 2,000,000 tons, and the production of anthracite was 1,000,000 tons—say a total of 3,000,000 tons, says the Engineering Magazine. At that time the population of the country was 17,000,000, so that there was probably less than one-sixth of a ton used per capita. Compare that with the present tonnage of 220,000,000 and a population of approximately 75,000,000, and it will be seen that America is now using per capita eighteen times as much coal as she did sixty years ago. In fact, since 1850 the per capita increase has been 150 per cent.

and Pennsylvania Great Roads. Private contributions secure at least 1000 traveling libraries in the rural communities of Pennsylvania this fall and winter, the legislature having made an appropriation for their support.

SCIENCE AND PROGRESS



in 100 air molecules in a wave-length of ordinary light. Every molecule is composed of atoms smaller than itself. Now, Dr. La Bue calculates that the particles dissociated by the electric current, which produces such phenomena as the fluorescent rays are so small that even atoms would appear to be "infinitely large" in comparison with them.

At the recent Bradford meeting of the British association a paper read by J. H. C. Kershaw dealt with the comparative cost of power produced by steam engines, water turbines and gas engines, with the result of showing that gas engines have a very promising future. The supremacy of the steam engine is now disputed, says the Baltimore Sun. On one side the water turbine, on the other the gas engine, has become its rival. "During the past ten years," says Mr. Kershaw, "a most remarkable development of hydraulic power has been taking place on the continent of Europe, in France and Germany, and in America at Niagara. The aggregate amount of power at the present date generated from falling water forms no inconsiderable portion of the total power utilized in the manufacturing industries, and two years ago it was estimated by the author to be between 224,000 and 260,000 horse power. On the other hand, gas engines, which have been found engaged in working out the problems presented by large gas engines and by the utilization of the waste gases of blast furnaces. Gas engines up to 450 horse power have been built and have worked smoothly and economically."

Local considerations will often decide one's choice between the three possible sources of power, but a large waterfall does not always give the cheapest power and the nearness of the coal field will not always make the steam engine preferable. The most economical source of power can only be determined after an exhaustive study of comparative cost data. Water, it is conceded, is the cheapest source of power if its fall can be utilized without much capital expenditure, but if it costs heavily to utilize it or to transmit the power when exhausted, then steam or gas may be cheaper. Some water powers developed in Switzerland, it is observed, cost more than the other sources of power. The practicability of large gas engines is settled, and under some circumstances they must displace the turbine and the steam engine. Their use may unsettle practical calculations. "If they do not cost excessively for maintenance and repairs," says the writer, "large gas engines, in comparison with steam engines and blast furnaces, may entirely alter the present position of affairs, and the new industries which at present are being established in the neighborhood of water power stations may find themselves in severe competition with similar industries carried on in the coal and iron districts of the older manufacturing countries."

PREVENTS SEASICKNESS.

The disagreeable affliction of seasickness often ruins an ocean voyage of half its pleasure and fills the traveler with dread of a return of the malady on his next trip and mars the pleasure of anticipation. With the idea of eliminating, to some extent at least, this disagreeable feature of crossing the ocean, two Englishmen have designed a self-leveling chair, which we illustrate herewith.



SELF-LEVELING CHAIR.

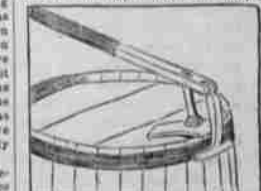
Herewith, the inventors claim that it will counteract the rolling and pitching motion of the boat in any direction. The method of suspension of the chair will certainly maintain the seat in a horizontal position and if this does not have the desired effect in extremely rough weather, or if the passenger desires to sit on deck, suitable screens are arranged to prevent the occupant from suffering the optical effect of motion at sea. It will be noticed that two rings are placed about the chair and by pivoting these rings at right angles to each other they will tilt it in such a manner as to hold the chair motionless in the roughest sea. The idea is also applied to berths on shipboard and by drawing the curtains and shutting out the view of the interior of the cabin the passenger may imagine himself safely on land again.

Smallest of the Small.

While we are accustomed to think of atoms as the smallest possible particles into which matter can be divided, recent experiments, particularly those of Dr. Gustave Le Bon, have indicated that, through electrical dissociation, atoms themselves are capable of subdivision into particles of amazing minuteness. Many years ago Lord Kelvin calculated the probable size of a molecule of air, and according to him about 25,000,000 such molecules laid in a row would measure an inch. There would

IMPLEMENT TO OPEN BARRELS.

The purpose of the invention illustrated in the accompanying cut is to provide an implement which will rapidly force the top hoops from barrels to allow the ends to be removed or inserted and the barrels headed up. A foot is provided, which rests either on the chime and projects inside the barrel or engages the head if the barrel has not been opened. This foot forms the fulcrum for the lever, which is provided at its outer end with a curved hook to be slipped under the hoops.



DEVICE TO REMOVE HOOPS.

When a downward movement of the lever detaches them from the staves, the implement being moved to two or more positions to loosen the different parts of the hoop. When used on a hoghead or large barrel the fulcrum and hook can be reversed, when a lifting movement will have the same effect. The inventor claims that the implement will do its work rapidly, without injury to the barrel or hoops.

Give Your Spectacles a Bath.

"Half of the people who wear glasses and complain that their sight is gradually dimming, wear the idea, is dirty glasses," remarks the optician. "Spectacles and eyeglasses are so much benefited by a bath now and then as people are. It is strange how many people there are who think that by wiping their glasses now and then they keep them clean. The fact is they want a bath as frequently as a human being. You see it is the same with the face, and especially the eyes. All the time give off a fine vapor. This clings to the glasses and the dust collects on them. As soon as they become clean—that is, apparently clean—the vapor is settled."

The process goes on. But while wiping the glasses cleans them, and is necessary, a bath is also required," quotes the Cleveland Plain Dealer. "Every time the glasses are wiped a fine film of dirt is left on them and this accumulates, and no wiping will clean it off. In time this coating gets quite thick enough to blur the vision, even though at a glance the glasses may appear clean. When this occurs the sight is diminished and they come to me or some other optician. What they ought to have done was to give the glasses a bath in warm water, with scrubbing them with a small toothbrush and soap and afterward wipe them. This should be done with champagne leather and then with tissue paper to polish them."

Strange Run on Mars.

Prof. Johannes Janssen, in developing his theory of the escape of gases from planetary atmospheres depending upon the force of gravity of the particular planet concerned, has concluded that helium at present is slowly escaping from the earth, and in a distant past time it probably escaped much more rapidly. From Mars, he says, water vapor must have escaped, even about the same readiness as helium fled from the earth, and accordingly the variable white patches about the poles of Mars are not snow, but probably are frozen carbon dioxide. Other appearances frequently observed on Mars are due, he thinks, to low-lying fogs of carbon dioxide vapor shifting alternately between the poles and the equatorial regions.

The Transportation of Gold.

Sir W. C. Houston-Austin has proved through an experiment extended over four years that when a column of lead is allowed to rest upon a column of gold a slow diffusion or evaporation of the gold takes place, resulting in the appearance of stripes of gold in the lead. When a degree of heat not sufficient to melt either of the metals is applied, the diffusion of the gold takes place more rapidly. The tendency in the particles is upward into the lead. As far as is yet known the evaporation of gold occurs only in the presence of another metal.

Taming the Waves with Nets.

A new plan for diminishing the force of waves has recently been tried at Havre. It is the invention of Baron d'Assolant, an Italian residing in Paris. The apparatus consists of a network of water-proofed hemp, 200 feet long by fifty broad, anchored on the surface of the water. It floats out heavy waves and prevents them from breaking. After the manner of oil spread upon the sea.